

APPENDIX A

39. **(New)** An isolated nucleic acid molecule comprising the nucleotide sequence set forth in SEQ ID NO:1, SEQ ID NO:7, SEQ ID NO:13, SEQ ID NO:17, SEQ ID NO:21, SEQ ID NO:25, SEQ ID NO:29, SEQ ID NO:33, SEQ ID NO:37, or SEQ ID NO:41, or a complement thereof.

40. **(New)** An isolated nucleic acid molecule consisting of the nucleotide sequence set forth in SEQ ID NO:1, SEQ ID NO:7, SEQ ID NO:13, SEQ ID NO:17, SEQ ID NO:21, SEQ ID NO:25, SEQ ID NO:29, SEQ ID NO:33, SEQ ID NO:37, or SEQ ID NO:41, or a complement thereof.

41. **(New)** An isolated nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence set forth in SEQ ID NO:2, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:18, SEQ ID NO:22, SEQ ID NO:26, SEQ ID NO:30, SEQ ID NO:34, SEQ ID NO:38, or SEQ ID NO:42, or a complement thereof.

42. **(New)** An isolated nucleic acid molecule which encodes a polypeptide consisting of the amino acid sequence set forth in SEQ ID NO:2, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:18, SEQ ID NO:22, SEQ ID NO:26, SEQ ID NO:30, SEQ ID NO:34, SEQ ID NO:38, or SEQ ID NO:42, or a complement thereof.

43. **(New)** An isolated nucleic acid molecule which encodes a MCP polypeptide comprising an amino acid sequence at least 50% identical to the amino acid sequence of SEQ ID NO:2, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:18, SEQ ID NO:22, SEQ ID NO:26, SEQ ID NO:30, SEQ ID NO:34, SEQ ID NO:38, or SEQ ID NO:42, wherein the nucleic acid molecule hybridizes to a nucleic acid molecule consisting of the complement of SEQ ID NO:1, SEQ ID NO:7, SEQ ID NO:13, SEQ ID NO:17, SEQ ID NO:21, SEQ ID NO:25, SEQ ID NO:29, SEQ ID NO:33, SEQ ID NO:37, or SEQ ID NO:41 at 6X SSC at 45° C, followed by one or more washes in 0.2X SSC, 0.1% SDS at 50-65° C.

44. (New) An isolated nucleic acid molecule which encodes a MCP polypeptide consisting of an amino acid sequence at least 50% identical to the amino acid sequence of SEQ ID NO:2, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:18, SEQ ID NO:22, SEQ ID NO:26, SEQ ID NO:30, SEQ ID NO:34, SEQ ID NO:38, or SEQ ID NO:42, wherein the nucleic acid molecule hybridizes to a nucleic acid molecule consisting of the complement of SEQ ID NO:1, SEQ ID NO:7, SEQ ID NO:13, SEQ ID NO:17, SEQ ID NO:21, SEQ ID NO:25, SEQ ID NO:29, SEQ ID NO:33, SEQ ID NO:37, or SEQ ID NO:41 at 6X SSC at 45° C, followed by one or more washes in 0.2X SSC, 0.1% SDS at 50-65° C.

45. (New) An isolated nucleic acid molecule comprising a nucleotide sequence which is at least 50% identical to the nucleotide sequence of SEQ ID NO:1, SEQ ID NO:7, SEQ ID NO:13, SEQ ID NO:17, SEQ ID NO:21, SEQ ID NO:25, SEQ ID NO:29, SEQ ID NO:33, SEQ ID NO:37, or SEQ ID NO:41, or a complement thereof.

46. (New) An isolated nucleic acid molecule consisting of a nucleotide sequence which is at least 50% identical to the nucleotide sequence of SEQ ID NO:1, SEQ ID NO:7, SEQ ID NO:13, SEQ ID NO:17, SEQ ID NO:21, SEQ ID NO:25, SEQ ID NO:29, SEQ ID NO:33, SEQ ID NO:37, or SEQ ID NO:41, or a complement thereof.

47. (New) An isolated nucleic acid molecule comprising a nucleotide sequence which is at least 50% identical to the nucleotide sequence of SEQ ID NO:1, SEQ ID NO:7, SEQ ID NO:13, SEQ ID NO:17, SEQ ID NO:21, SEQ ID NO:25, SEQ ID NO:29, SEQ ID NO:33, SEQ ID NO:37, or SEQ ID NO:41, or a complement thereof, wherein said nucleotide sequence encodes a polypeptide which is capable of modulating the production of a fine chemical.

48. (New) An isolated nucleic acid molecule consisting of a nucleotide sequence which is at least 50% identical to the nucleotide sequence of SEQ ID NO:1, SEQ ID NO:7, SEQ ID NO:13, SEQ ID NO:17, SEQ ID NO:21, SEQ ID NO:25, SEQ ID NO:29, SEQ ID NO:33, SEQ ID NO:37, or SEQ ID NO:41, or a complement thereof, wherein said nucleotide sequence encodes a polypeptide which is capable of modulating the production of a fine chemical.

49. (New) An isolated nucleic acid molecule comprising a fragment of at least 15 contiguous nucleotides of the nucleic acid sequence of SEQ ID NO:1, SEQ ID NO:7, SEQ ID NO:13, SEQ ID NO:17, SEQ ID NO:21, SEQ ID NO:25, SEQ ID NO:29, SEQ ID NO:33, SEQ ID NO:37, or SEQ ID NO:41, or a complement thereof.

50. (New) An isolated nucleic acid molecule which encodes a polypeptide comprising an amino acid sequence at least 50% identical to the amino acid sequence of SEQ ID NO:2, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:18, SEQ ID NO:22, SEQ ID NO:26, SEQ ID NO:30, SEQ ID NO:34, SEQ ID NO:38, or SEQ ID NO:42.

51. (New) An isolated nucleic acid molecule which encodes a polypeptide consisting of an amino acid sequence at least 50% identical to the amino acid sequence of SEQ ID NO:2, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:18, SEQ ID NO:22, SEQ ID NO:26, SEQ ID NO:30, SEQ ID NO:34, SEQ ID NO:38, or SEQ ID NO:42.

52. (New) An isolated nucleic acid molecule which encodes a polypeptide comprising an amino acid sequence at least 50% identical to the amino acid sequence of SEQ ID NO:2, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:18, SEQ ID NO:22, SEQ ID NO:26, SEQ ID NO:30, SEQ ID NO:34, SEQ ID NO:38, or SEQ ID NO:42, wherein said polypeptide is a MCP polypeptide and wherein said polypeptide is capable of modulating the production of a fine chemical.

53. (New) An isolated nucleic acid molecule which encodes a polypeptide consisting of an amino acid sequence at least 50% identical to the amino acid sequence of SEQ ID NO:2, SEQ ID NO:8, SEQ ID NO:14, SEQ ID NO:18, SEQ ID NO:22, SEQ ID NO:26, SEQ ID NO:30, SEQ ID NO:34, SEQ ID NO:38, or SEQ ID NO:42 wherein said polypeptide is a MCP polypeptide and wherein said polypeptide is capable of modulating the production of a fine chemical.

54. (New) An isolated nucleic acid molecule comprising the nucleic acid molecule of any one of claims 39-42, and a nucleotide sequence encoding a heterologous polypeptide.

55. (New) A vector comprising the nucleic acid molecule of any one of claims 39-42.

56. (New) The vector of claim 55, which is an expression vector.

57. (New) A host cell transfected with the expression vector of claim 56.

58. (New) The host cell of claim 57, wherein said cell is a bacterial cell.

59. (New) The host cell of claim 58, wherein said cell belongs to the genus *Corynebacterium* or *Brevibacterium*.

60. (New) The host cell of claim 59, wherein the expression of said nucleic acid molecule results in the modulation in production of a fine chemical from said cell.

61. (New) The host cell of claim 60, wherein said fine chemical is selected from the group consisting of: organic acids, proteinogenic and nonproteinogenic amino acids, purine and pyrimidine bases, nucleosides, nucleotides, lipids, saturated and unsaturated fatty acids, diols, carbohydrates, aromatic compounds, vitamins, cofactors, polyketides, and enzymes.

62. (New) A method of producing a polypeptide comprising culturing the host cell of claim 57 under conditions in which the nucleic acid molecule is expressed, thereby expressing the polypeptide.